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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/561,226

03/26/2007

Jong-Yang Kim

50238

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7590

02/18/2009

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WASHINGTON,, DC 20036

EXAMINER

GU, YU

ART UNIT

PAPER NUMBER

2617

MAIL DATE

DELIVERY MODE

02/18/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/561,226	Applicant(s) KIM ET AL.	
	Examiner YU (Andy) GU	Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 December 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>3/26/2007</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-11 are presented for examination.

Priority

2. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). Certified copies have been filed with the application on 12/19/2005.

Information Disclosure Statement

3. The information disclosure statements (IDS) submitted on 3/26/2007 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statements are being considered by the examiner.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. **Claim 2** is rejected under 35 U.S.C. 112, **first** paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claim 2 recites "the first magnetic body has a polarity, in the both ends thereof ...". Therefore there are two polarities (e.g. N and S pole) in the ends of the first magnetic body. Claim 2 further recites "...in the central portion of..." alluding to a third polarity existing between the two polarities positioned in the ends of the first magnetic body.

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However, the existence of a "third polarity" on a single magnetic body is not known to a person reasonably skilled in the art.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. **Claim 3** is rejected under 35 U.S.C. 112, **second** paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 3 recites the limitation "the base plate". There is insufficient antecedent basis for this limitation in the claim. For the purpose of this examination, "the base plate" is interpreted as the "the first base plate".

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. **Claims 1-2** are rejected under 35 U.S.C. 102(e) as being anticipated by US 6980840 B2 Kim et al. (hereinafter Kim).

Regarding **claim 1**, Kim discloses *a driving apparatus of a sliding-type portable wireless terminal using a magnetic body* (see at least Figure 14-15 and column 8 lines 58-63), *the terminal having a main body* (see at least Figure 15 item 10) *and a sub-body* (see at least Figure 15 item 20) *adapted to slide along the longitudinal direction of the main*

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body to be opened/closed (see at least Figure 2A and 2B), the driving apparatus comprising:

- *a first magnetic body module (see at least Figure 15 item 20) positioned on the rear surface of the sub-body and having a magnetic body (see at least Figure 15 item 70) fastened thereon, which has a predetermined polarity and which extends along the longitudinal direction (see at least Figure 2A and 2B) thereof (see at least column 8 lines 58-63),*
- *and a second magnetic body module (see at least Figure 15 item 10) positioned on the front surface of the main body and having a magnetic body (see at least Figure 15 item 74) fastened thereon, which has a predetermined polarity and faces the magnetic body of the first magnetic body module (see at least column 8 lines 46-51 and 64-67).*

Regarding **claim 2**, Kim discloses the limitations as shown in the rejection of claim **1**,

Kim further discloses:

- *wherein the magnetic body of the first magnetic body module has a polarity, in both ends thereof (i.e. dual polarities intrinsically exist on the ends of a magnetic body), which exerts a drawing force in relation to the magnetic body of the second magnetic body module and another polarity (see at least column 8 lines 64-67, where Kim discloses that the second magnetic body i.e. Figure 15 item 74 and the first magnetic body i.e. Figure 15 item 70 are of opposite polarity, therefore 70 and 74 exert a drawing force on each other to maintain the closed state), in the central portion thereof, which exerts a repulsive force in relation to*

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the magnetic body of the second magnetic body module (see at least column 9 lines 1-8, where Kim discloses the first and second magnetic body repulse each other).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 3-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim in view of US 20020137476 A1 Shin (hereinafter Shin).

Regarding **claim 3**, Kim discloses the limitations as shown in the rejection of claim 1. Kim further discloses that the magnetic body (i.e. Figure 15 item 70) is fastened on a surface or the sub-body. Kim is silent as to the limitation “a first base plate”, and therefore fails to disclose *wherein the first magnetic body module has a first base plate fastened on the rear surface of the sub-body, a pair of sliding guides fastened on a surface of the base plate and extending along the longitudinal direction of the first base plate, and the magnetic body fastened on a surface of the first base plate*. However, in the same field of endeavor, Shin teaches using a sliding module that has a base plate (i.e. see at least Shin Figure 4 item 420) fasten on the rear surface of a sub body of a mobile phone (see at least shin Figure 3 item 312 and paragraph [0036] where Shin discloses that item 420 (i.e. a base plate) is attached to a upper housing i.e. analogues

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to the sub-body). Shin further disclose a pair of sliding guides (i.e. see at least Shin Figure 4 item 413 and 414 and paragraph [0037]) fastened on a surface of the base plate that extending along the longitudinal direction of the base plate. It would have been obvious to a person of ordinary skill in the art to modify Kim in view of Shin in order to facilitate the sliding action between the sub-body and the main body.

Regarding **claim 4**, Kim and Shin disclose the limitations as shown in the rejection of claim **1** and **3**. Kim further discloses that the magnetic body fastened on the second magnetic body module faces the magnetic body fastened on the first magnetic body module (see at least Figure 15). Kim is silent as to the limitation “*a second base plate*”, and therefore is silent as to *wherein the second magnetic body module has a second base plate adapted to face the first base plate and sliding grooves formed on a surface of the second base plate to be engaged with the sliding guides for sliding, and the magnetic body of the second magnetic body module is fastened on a surface of the second base plate and faces the magnetic body of the first magnetic body module, which is fastened on a surface of the first base plate*. However, in the same field of endeavor, Shin discloses a second base plate (see at least Shin Figure 4 item 430) adapted to face a first base plate (i.e. item 420), and has sliding grooves (see at least Figure 4 item h1) formed on the surface of the second base plate (see at least Shin paragraph [0035]-[0037]). It would have been obvious to a person of ordinary skill in the art to modify Kim in view of Shin in order to facilitate the sliding action between the sub-body and the main body.

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7. Claims 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim in view of US 5956625 Hansen et al. (hereinafter Hansen).

Regarding **claim 5**, Kim discloses the limitations as shown in the rejection of claim 1.

Kim is silent as to the limitation *wherein the first magnetic body module includes three pairs of N. and S. poles alternated along the longitudinal direction thereof and the second magnetic body module includes S. and N. poles so that the sub-body can be stopped in first, second, and third positions as it slides on the main body.*

However, in the same field of endeavor, Hansen discloses a mobile phone device with a slide-type sub-body (i.e. cover) and a main-body, Hansen further discloses three positional states between the sub-body and the main-body (see at least Hansen Figure 1-3) wherein different regions of the main-body are exposed for user operation (see at least Hansen column 3 lines 26-45). It would have been obvious to a person of ordinary skill in the art to modify Kim in view of Hansen to incorporate three positional states in order to enhance usability of the device. Furthermore, in view of Kim's teaching of using a pair of N and S pole (i.e. see at least Kim Figure 15 item 70) to establish a positional state, in order to establish three positional states, it would have been obvious to one of ordinary skill in the art to modify Kim to use three pairs of N. and S. alternated along the longitudinal direction.

Regarding **claim 6**, Kim and Hansen discloses the limitations as shown in the rejection of claim 1 and 5. Kim is silent as to the limitations of claim 6. However, Hansen discloses *a main body has first (e.g. key group 6) and second regions (e.g. key group 7) defined in series along the longitudinal direction thereof in the lower half portion of the*

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front surface thereof, and the sub-body is adapted to completely cover both the first and second regions when stopped in the first position (see at least Hansen Figure 1), to expose only the first region when stopped in the second position (see at least Hansen Figure 2), and to expose both the first and second regions when stopped in the third position (see at least Hansen Figure 3). It would have been obvious to a person of ordinary skill in the art to modify Kim in view of Hansen in order to enhance usability of the device (see at least Hansen column 3 lines 26-45).

Regarding **claim 7**, Kim and Hansen discloses the limitations as shown in the rejection of claim **1** and **5**. Kim is silent as to the limitations of claim 7. However, in the same field of endeavor, Hansen discloses a mobile phone device with a slide-type sub-body (i.e. cover) and a main-body, Hansen further discloses three positional states between the sub-body and the main-body (see at least Hansen Figure 1-3) wherein different regions of the main-body are exposed for user operation (see at least Hansen column 3 lines 26-45). It would have been obvious to a person of ordinary skill in the art to modify Kim in view of Hansen to incorporate three positional states in order to enhance usability of the device. Furthermore, in view of Kim's teaching of using a magnetic body (therefore intrinsically comprising N and S poles) to establish a positional state, in order to establish three positional states (see at least Kim Figure 15 item 70 and column 8 lines 57-67), it would have been obvious to one of ordinary skill in the art to modify Kim to arrange three magnetic bodies along the longitudinal direction of the first magnetic body module.

Regarding **claim 8**, Kim and Hansen discloses the limitations as shown in the rejection

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of claim **1** and **5**. Kim is silent as to the limitation *a main body has a first region defined in the lower end of its front surface and a second region in the upper end thereof, and the sub-body is adapted to completely cover both the first and second regions when stopped in the first position, to expose the first region when stopped in the second position, and to expose the second region when stopped in the third position*. However, Hansen discloses a device that has two regions defined (in terms of key groups e.g. key group 6 and 7 see at least Hansen Figure 3) in front surface, Hansen further discloses that a first position wherein both regions are covered (see at least Hansen Figure 1) and a second position wherein one of regions (i.e. key group 6, see at least Hansen Figure 2) is exposed, and a third position (see at least Hansen Figure 3) wherein both regions are exposed. It would have been obvious to a person of ordinary skill in the art to modify Kim in view of Hansen in order to enhance usability of the device (see at least Hansen column 3 lines 26-45).

8. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kim in view of US 6947777 B2 Crum (hereinafter Crum).

Regarding **claim 9**, Kim discloses the limitations as shown in the rejection of claim **1**. Kim is silent as to the limitation *wherein the first and second magnetic body modules are provided with shield members so that the magnetic force from the magnetic bodies, which are fastened thereon, cannot be discharged out of the driving apparatus*. In a related field of endeavor, Crum discloses the using a magnetic material in the construction of an electronic communication device (see at least Crum abstract), Crum further discloses shielding the magnetic material (see at least Crum column 2 lines 5-21).

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It would have been obvious to a person of ordinary skill in the art to modify Kim in view of Crum in order to ensure the proper operation of the communication device.

9. **Claim 10** is rejected under 35 U.S.C. 103(a) as being unpatentable over Kim in view of Crum and Shin.

Regarding **claim 10**, Kim and Crum discloses the limitations as shown in the rejection of claim 1 and **9**. Kim is silent as to the limitations of claim 10. However, in the same field of endeavor, Shin teaches a first base plate (i.e. see at least Shin Figure 4 item 420) fasten on the rear surface of a sub body of a mobile phone (see at least shin Figure 3 item 312 and paragraph [0036] where Shin discloses that item 420 i.e. the first base plate is attached to a upper housing i.e. analogues to the sub-body). Shin further teaches a *second magnetic body module has a second base plate* (see at least Shin Figure 4 item 430) *fastened on the front surface of the main body and coupled to the first base plate* (i.e. item 420) *in such a manner that it can slide while facing the first base plate* (see at least Shin paragraph [0035]-[0037]). It would have been obvious to obvious to a person of ordinary skill in the art to modify Kim in view of Shin to fasten the magnetic bodies on the respective base plates in order to facilitate the sliding action between the sub-body and the main body, therefore, one of ordinary skilled in the art would also applied shield members on the magnetic bodies (therefore on the surfaces of respective base plates) as taught by Crum in order to ensure the proper operation of communication device.

10. **Claim 11** is rejected under 35 U.S.C. 103(a) as being unpatentable over Kim in view of Crum US 6136131 A Sosnowski (hereinafter Sosnowski).

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Regarding **claim 11**, Kim and Crum discloses the limitations as shown in the rejection of claim 1 and **9**. Kim is silent as to the limitation *wherein the shield members are made of a material chosen from the group comprising a spring steel plate, an electric zinc-plated steel plate, and a silicon steel plate*. However, in a related field of endeavor, Sosnowski discloses using steel to reduce magnetic interference (see at least Sosnowski column 3 lines 12-20). It would have been obvious to a person of ordinary skill in the art to make the shield members from steel materials (e.g. spring steel plate) because Sosnowski teaches that steel preferred for shielding magnetic interference.

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to YU (Andy) GU whose telephone number is (571)270-7233. The examiner can normally be reached on Mon-Thur 8:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester G. Kincaid can be reached on 5712727922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/YU (Andy) GU/
Examiner, Art Unit 2617

/Lester Kincaid/
Supervisory Patent Examiner, Art Unit 2617